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The Fight for the West: A Political Ecology of Land Use Conflicts in Arizona

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The commoditization of natural resources in a global economic system and the territorialization practices of nation-states present formidable challenges to the sustainable use of natural resources. Likewise, certain environmental problems such as growth management and residential sprawl have proved intractable to our existing political processes. This case study of grazing and growth conflicts in Arizona demonstrates that intractable environmental problems may actually be emergent properties of complex systems, requiring new political approaches that foster collaboration and knowledge sharing between disputing stakeholders. One such collaboration in Arizona revealed that attempts to remove grazing from Arizona landscapes could actually be to the detriment of biodiversity, contrary to the expectations of grazing critics.

Key words: grazing, environmental conflict, land tenure, politics, sprawl, Arizona

Since World War II migration to western states has increased dramatically, in recent years resulting in residential sprawl and creating conflicts between urban and rural populations over land use on millions of acres of public land. The issues are far more complex than public debates and proposed solutions would indicate (see Sheridan 2001). Ultimately, at stake in these conflicts are not just the values and interests of these groups, but how humans can inhabit landscapes and use natural resources sustainably.

In this essay we tap political ecology, the science of complexity, and the field of environmental conflict resolution (ECR) to understand the issues around land-use conflicts in Arizona and to frame the problem of sustainability. These approaches may also help us to reintegrate the ecological, economic, and sociopolitical aspects of systems that have

been the special purview of narrow disciplines and so open a space for building more effective understandings and solutions to broad-scale environmental problems.

The Problem of Sustainability¹

Ecological systems evolve logics of interaction and production based on such processes as nutrient cycling, energy flows, and water cycles. Ecological regions or zones may be characterized by their specific elements (such as soil types, geomorphology, elevation, climate) that together create the potential for biotic production at an identifiable level and diversity, even given their stochastic nature (see Brogden n.d.). Overextraction of natural resources can degrade or significantly alter elements of an ecosystem, "tipping" it beyond its ability to recover from the external perturbation to sustain the same degree of biotic productivity and diversity. In theory, sustainable natural resource use implies: 1) that extractive activities do not outstrip a resource in the short term; and 2) that the ecological system in which it is embedded maintains the ability to regenerate the resource over the long term.

The economic sustainability of an enterprise or a household requires that income exceed expenditures by a sufficient margin to meet its needs over time. Economic systems evolve logics of interaction and production based on prices, markets, and costs that are quite different from those governing ecological systems. The problem for policy makers is how to reconcile these very different rationalities.

If there is to be a sustainable intersection between economic and ecological functioning, governance structures and social institutions are needed that enable resource users to accommodate (and even benefit from) the temporal and spatial variability of natural resources. At the same time, these

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institutions must successfully mediate two things: competing claims to resources; and the different outcome timescales associated with economic decision making and ecological functioning. Ideally, mechanisms are available to resolve conflicts over competing claims peaceably and stably, and natural resources allocation balances the need for moderation in use of resources against the need for extraction at levels sufficient to support households or business enterprises.

In a classic subsistence economy, producers are in a direct conversation with nature and make limited demands on a variety of natural system elements. Populations may evolve sustainable practices because nature provides them feedback and payoffs in the form of increasing or decreasing biotic productivity. By contrast, in modern industrialized economies, extensive external inputs decouple economic actors from locales. Nature no longer provides direct payoffs and feedback. Natural resource users converse with markets instead of nature and work to maximize profit by sourcing elements of ecological systems from all over the globe, rather than maximizing the biotic productivity of a local ecological system over time. Demands for resources seem infinite.

In such societies, sustainable use of natural systems and their elements will require an integrative approach to the management and regulation of identifiable ecological units—such as watersheds or ecoregions—that respects the logics of the ecological system. However, at least three macrolevel forces work against such management: global economic integration; specialized academic disciplines; and the territorialization practices of nation-states, which divide ecosystems into spatially and conceptually fractured jurisdictions.

Natural Resources and Commoditization

The commoditization of certain elements within natural systems subjects them to a different logic—that of the market—where decisions regarding resources are severed from a perception and understanding of their role within ecological system functioning. Nature is stripped of local meaning that may serve a necessary mediative role and becomes merely an array of commodities. Globalization exacerbates these effects because decisions occur in global markets and boardrooms far distant from local ecological systems. Furthermore, global markets and multinational corporations source natural elements from all over the planet, driving prices down and setting up conditions in which, to sustain themselves, local producers must extract more of a resource to make up for the reduction in price. Finally, since economic processes transcend the boundaries of nation-states, these centers of economic decision making can exert enormous pressure on governments for favorable decisions in ongoing contests over territorialization of resources, making the challenges to sustainable human use of natural resources formidable indeed.

When land is commoditized as real estate it becomes, to some degree, a good like any other that may be bought and sold rather than seen as an integral part of ecosystems (Godelier 1977; Greenberg 1998; Marx 1977; Taussig 1980).

Yet, because land is spatially fixed, its commoditization takes on somewhat different dynamics than do mobile resources. Even in complex contemporary societies, what happens to land inextricably remains tied to local contexts even if ownership is not.

Sprawling residential development currently challenges the sustainable use of natural resources. Nonetheless, in the spatial-fixedness of land and its inexorable relation to local communities, we do spy a kind of hope. Where competing groups are able to understand how their interests in landscapes might intersect, they may join forces and press for integrative approaches to the management of landscapes and the associated ecological systems they support. In fact, a number of these experiments are underway across the West as community-based collaborative (CBC) groups have formed to resolve local conflicts over resources and implement more holistic resource management. They will likely not succeed, however, unless participants can extend their purview and influence to the policy level, where resource territorializations are defined and contested.

Territorialization: Setting the Rules of Human Engagement with the Natural World

The absence of sociopolitical institutions that regulate resource use and ownership sets up an incentive for individuals to rapidly degrade a resource because, as Hardin (1968) identified, if an individual does not make use of the resource, someone else will, and the opportunity for use will be lost. Hardin mistakenly described this dynamic as the “tragedy of the commons,” a notion that has been critiqued (McCay and Acherson 1987; Netting 1993) because he applied his argument to communally owned resources under the assumption that these lacked rules of access. What he actually described was an open-access regime, where resource degradation indeed occurs because no rules of access and use exist, leading to what is more properly called a “tragedy of open access.” The enduring challenge for sustainable human engagement with the environment is to establish and enforce rules of engagement that enable resource users and managers to respond flexibly to changing systems and new information, while providing the stability of access that enables planning.

Contemporary nation-states generate numerous structural obstacles to the development of flexible frameworks because of how they manage resources. They carve up the natural world into both physical spaces that define territorial units and their boundaries, as well as conceptual spaces through which jurisdiction over particular resources is divided among bureaucratic structures. In the United States, for example, forests are the responsibility of the United States Department of Agriculture’s (USDA) Forest Service, while wildlife is managed by state wildlife agencies and, in cases of species endangerment, the U.S. Department of Interior’s Fish and Wildlife Service. These physical and conceptual “territorializations” of resources set the rules of production, control,

and access (Heyman 1994:13-14; Mann 1993:44-91), though they usually make virtually no sense from an ecological standpoint. Furthermore, since bureaucratic structures are set up to simplify and regularize decision making, their responsiveness to local variance and ability to mediate competing claims to resources becomes limited as the rules of access and use are inscribed in law and administrative procedures.

As the state defines spaces and organizes resources by setting up jurisdictions and administrative rules, these arrangements in turn draw the social and political fault lines along which further disputes develop. It is important to understand that territorializations are historical products of contestation and negotiation for access and control over natural resources among competing groups, interests, and classes. As such, they embed certain environmental values, and these become part of the political idiom through which territorializations are justified or contested. Conflicts develop on the ground as well as in political arenas, where competing interests seek to influence or gain control over the agencies, laws, and regulations that govern natural resources. In the United States, territorializations are contested through political lobbying at Congress and state legislatures, elections, organized public input to and appeals of administrative rule making, litigation, and grassroots activism. Political organizing and disputing are thus ways that civil society has communicated with the state, and interest groups press arguments through the politics of pluralism.

In this interface between state and civil society, some actors achieve voice and some do not. Pluralistic politics leave out actors and interest groups who are too small or too powerless to be effective as lobbyists and too scattered politically to be able to elect representatives. Globalization may move the interests of marginalized groups and local communities even further off-stage. Fairness would insist that these groups find effective voice. But as our case study will show, fairness is not the only reason why it is important they find voice.

Reterritorialization: When Existing Tenure Arrangements are Successfully Contested

Reterritorialization occurs where there is a reassignment of resource access rights to a different population or interest group. This can simply be that different users now have access to the same natural resource elements. Alternatively, reterritorialization can occur when an interest group redefines commodity values and achieves the power to rearrange access rights to a natural *system* so that earlier commodity values become obsolete and disprivileged. An example of this more complex reterritorialization process can be seen in the American Southwest. Here livestock grazing on public lands is being challenged by urban-based environmentalists who are not only seeking to protect wilderness and its wildlife, but are also looking for recreational spaces where they can commune with nature.

When a new value conflicts with the old *and* power shifts enough that the new commodity value achieves a plurality, reterritorialization results in previous users losing access to territories supporting the earlier commodity values. Territories and agency policies may then be redrawn to maximize production of the new resource value. Predictable discursive strategies assist this process, often villainizing the historical user personally, culturally, and for degrading the natural system.

Such discourse becomes particularly salient in democratic electoral processes where voters have a slew of issues and candidates to decide upon and have neither the time, the expertise, nor the inclination to study each issue in its complexity. Well-honed, catchy “messages” disseminated through media sound bytes and local reporting appeal to popular values and ideologies, thereby mystifying the fact that these disputes are actually competing claims between interest groups, rather than clear moral imperatives. Furthermore, these arguments may have nothing whatsoever to do with fostering sustainable resource use, even where their proponents are utterly convinced they do.

The case study we present below shows that simply getting cows off public lands will not preserve wildlife values. It also shows how contesting groups often exhibit, at the same time, both excellent intentions toward the resource (e.g., wanting it to persist into the future) and self-interest (e.g., wanting something from it). While these usually do not coincide completely, we hasten to add that we do not view the pursuit of self-interest negatively; rather, we believe it must be viewed clearly. Existing uses or practices may indeed be detrimental to an ecological system and in need of change. But in the contemporary era, as we suggest below, it is highly unlikely the type of change necessary to enable ecological system recovery can be known by a single interest group. Complex systems encompass a web of causality and relations and require, at the least, exchanging information among actors to achieve an understanding of the system’s complexity, co-constructing potential solutions among competitors, and making arrangements for adjusting the solution as circumstances, knowledge, and the environment change.

Where ecological problems arise, they often entail multifaceted legal and political disputes that may involve a host of local, state, and national bureaucracies. In such disputes, local communities and users, who often are both the most dependent upon and the most knowledgeable about the resource, have difficulty achieving voice. Even when governmental policies and regulatory efforts attempt to strike a balance between the conservation of natural resources and the interests of various groups, these efforts are frequently either poorly coordinated or have contradictory effects on the ecosystem. As a result, years may pass before any solution or agreement is reached. In the meantime, irreversible environmental damage may continue (Rappaport 1994).

Below we turn to a case study of reterritorialization processes in Arizona. Data for this case study come from

six years (1997-2002) of participant observation research on conflicts over land use in Arizona, including over 100 formal and informal interviews with ranchers, conservation and environmental NGO representatives, ranchette owners, federal and state agency representatives, and other public officials. Some interviews were conducted in researching the transition from ranching to real estate development in one Arizona community. Others were conducted as part of research on the negotiation process of the Arizona Growing Smarter Commission and during the political implementation of its results in the following legislative session. Interviews were also completed in preparation for a conference about growth management initiatives on the 2000 ballot in Arizona. In addition, Brogden observed public meetings of the Sonoita Valley Planning Partnership and the Diablo Trust, two community-based collaborative groups in Arizona; as well as public meetings of the Arizona Growing Smarter Commission during 1999 and of the 2000 Arizona Legislature. Participant observation data were also obtained in the course of Brogden's facilitation of stakeholder dialogue in the Arizona Common Ground Roundtable.

Reterritorialization in the American Southwest: A Case Study

A significant reterritorialization process began after World War II in the western and southwestern United States. It has accelerated in the past two decades, propelled largely by demographic pressure as migrants from the East, the Midwest, and California move into the intermountain West in search of, among other things, lifestyles with more elbow room, better weather, and gorgeous views.

Actually, there are two reterritorializations occurring, following two different but related commoditizations of the landscape. The first is occurring on public lands, where urban dwellers value the landscape as a context for recreational experience that includes seeing abundant wildlife and "communing with nature." To the extent that domestic livestock compete for forage with wildlife, as well as leave "cowpies" on hiking trails, grazing and the new recreational values appear at odds, and conflict has ensued. Over time, urban environmentalists have elaborated a discourse that has painted a picture of morally deficient ranchers degrading the public's resources on the public's lands while eating at the public trough.

Their assertion of resource degradation is not without foundation. In some areas, overgrazing and overstocking have resulted in environmental degradation—some quite serious—though the worst of it occurred around the turn of the 20th century, when a tragedy of open access was occurring, and before limitations on access to rangeland commons were instituted (Sayer 1999; Sheridan 2001). So, when environmentalists have looked at the condition of rangelands, there is a basis in fact for their complaints. What is not widely known is that it was ranchers themselves who insisted regulation

was needed at the turn of the 20th century, and they were highly impatient that it was not happening quickly enough (see Hadley 2001). This should give pause: social institutions that mediate resource access and use do not come into being overnight.

Urban-based environmentalists have sought to use the Endangered Species Act of 1973 to challenge ranching because they see grazing as the major culprit in the endangerment of species in the Southwest. But, according to James H. Brown, biologist and past president of the Ecological Society of America, "Far more habitat has been destroyed to provide water to cities, subdivisions, and irrigated agriculture than by even the heaviest grazing pressure" (Clifford 1998: A33). And ranched areas are often the primary—or even the only—areas where species of concern are now found.² It should surprise no one that the most successful attempts by urban environmentalists to preserve some of these species are being fought in rural areas, against a subculture with few voters.

At the same time, urban environmentalists have also been on the front lines in their own immediate environments, trying to gain some control over what is happening with real estate development. Indeed, they are well aware of the pressure on ecological systems concomitant with the commoditization of landscape in residential development. Time and again in areas of population growth, developers seem to get exactly what they want in rezonings, zoning protection of the rights to develop, legislation, and land purchases. In pursuing their business, developers carve up more and more of the landscape surrounding cities whose inhabitants would prefer that it be left as open space. And it seems to matter not that polls show that a supermajority of the public wishes it to be left this way (74% in a January 2000 Greater Phoenix Leadership poll). Virtually the only tools that enable environmentalists to get some political leverage in the fight to control development are endangered species lawsuits.

Sprawl—the second reterritorialization in the Southwest—is happening despite almost no one wanting it, not even developers. But each interest group is actually complicit in its occurrence. The phenomenon proceeds via a combination of "if we build it they will come" and many individuals making myriad individual decisions to live in pretty natural areas.

In interviews completed in 1996-97 with 20 rural ranchette owners (resident <15 years) in an area undergoing conversion from ranching to residential development, newcomers to one desirable rural area rationalized their decision to build with comments like: "It's just one small parcel," and, "If I don't do it someone else will." Or, "If I thought for one minute that my moving back into an urban area would stop development in this area, I'd do it." And, "Why should I restrain myself when no one else does?" Such comments evince the dynamics of an open-access regime.

The two reterritorializations—one apparently wanted by the environmentalist community and one apparently not—are connected because of how ranching evolved in Arizona. Ranching is a land-extensive activity in the semiarid Southwest. It requires access to significant areas of forage

to be economically viable. The homesteading model of 160 acres exported from the Midwest was woefully inadequate in Arizona; even increasing the homestead allocation to 640 acres proved insufficient. Consequently, land tenure arrangements developed over time that provided ranchers with access to forage on federal and State Trust lands, but did not result in land-ownership concentration in the hands of a very few.

Ranch units in Arizona are overwhelmingly comprised of a deeded portion owned outright by the rancher and forage leases on public lands (Sayer 1999; Sheridan 2001). This system of tenure rights has been institutionalized at the federal level within administrative policies of the USDA Forest Service and the Department of Interior's Bureau of Land Management, and at the state level in Arizona State Land Department policies. These are now being challenged through lawsuits as part of the reterritorialization process underway.

There have been some interesting advantages to this system. First, land ownership patterns in some parts of Arizona are highly checkered because of how lands were selected to go into the school trust as State Trust lands and because of how the early settlers selected homestead acreages. The deeded portions of ranches in Arizona—and elsewhere in the West—contain the most productive, water-rich, and biodiverse areas of the region. Land remaining in federal and state ownership surrounds private lands. If lands and resources had been individually managed as the mosaic pieces evident on an Arizona land-ownership map, the landscape could have ended up, in effect, quite fragmented. However, the tenure system that evolved to help assure economic viability also helped to assure that larger areas of land would be managed together, enabling ranchers to move herds in rotation systems that allow regeneration of forage plants.

Second, federal ownership protects a significant portion of Arizona lands from development. However, the private lands in the state that can be sold and converted for residential and ranchette development are exactly those with the most biodiversity along streams and fertile bottomlands. Residential development is much more of a threat to species (in most cases) than ranching, especially as real estate development turns into sprawl (Sheridan 2001). So despite the landscape impacts of livestock grazing in Arizona, in some important respects it has actually worked to conserve ecological values over time.

The arid Southwest is marginal for agricultural production since it is subject to drought. Ranching has been a way for some to earn a living from the land until it could appreciate in value enough to be sold and used for some other purpose, either commercial or residential development. Like other agriculturalists across the country, ranchers are usually land rich and cash poor. Ranchers therefore hold two somewhat competing interests at the same time:

1. They want to use the land for ranching and maintain their rural livelihood strategy because they have built up their

expertise, their herds, and their unique, embodied funds of knowledge of the land and food production over time, knowledge that was hard won and that few urban dwellers have; and

2. They hope their land will appreciate in value because if the ranching enterprise fails, they can sell the land and secure their financial future and that of their heirs.

While ranchers feel compelled to try to protect both of their interests (Arizona Common Ground Roundtable discussion, April 1998), the latter assumes priority when:

1. access arrangements on public lands become too tenuous;
2. ranch economics are unfavorable because of globalization of agricultural commodities markets; and
3. land prices are skyrocketing (Brogden n.d.; Sheridan 2001).

Thus, reterritorialization on public lands becomes tied to reterritorialization on private lands, and urban dwellers and ranchers become locked in a dance toward urban sprawl and rural fragmentation from ranchette development—an outcome desired by neither side.

Complexity and the Intractability of Emergent Systemic Problems

The dynamics of residential sprawl reveal that, ironically, the most open-access regime going is based on the market. Contrary to Hardin's expectations that privatization of the commons would halt resource degradation, private property sold through an open-access land market is precisely what is driving urban sprawl and the piecemeal fractionalization of rural landscapes that threaten biodiversity. This implies that to create effective stewardship of resources, rules governing what lands may be turned into commodities must be developed. How would this happen, though, with a legal system highly elaborated around private property and its attendant rights?

An even more fundamental question is, why, in a democratic society, are such problems so intractable? If no one wants sprawl and loss of open space, why are these outcomes so difficult to stop? The new science of complexity may offer a key to understanding why such problems arise and become intractable. "Emergence" in self-organizing systems is one of the most useful concepts deriving from complexity theory. Emergence refers to a persistent observable pattern that results from local interactions of individuals but is not available to, or producible by, any single individual or interaction. Emergent properties of systems develop in the absence of a centralized governance structure or plan.

The phenomenon of emergence has been illustrated by Stuart Kauffman (1995:56) in the following way: suppose a set of buttons are scattered on a table and someone randomly

picks two up, connects them together with a thread, and then sets them down. Then he picks up two more, connects them together with another thread, and sets them down. He continues to do this. After awhile he will begin to lift a few additional buttons with the two he has selected because they are also connected to the two selected. But at a certain point, when he goes to pick up two buttons, so much connectivity will have developed that he will observe what's called a "phase transition." That is, he will pick up a whole web of threads and buttons along with the two buttons he has chosen. That web is an emergent property of a system that self-organized from the simple repeated act of connecting two buttons together with a single thread.

Applied to social or ecological systems, emergence results from local interactions of individuals, but an individual interaction cannot produce the emergent structure. The whole, in other words, is more than the sum of its parts. Local customs, rules, and desires may give rise to systemic outcomes that are not expected, intended, or even desired by individual actors.

Sprawl is happening partly because increasing wealth and migration are creating a market for the commoditization of landscape. However, that explanation captures only part of the systemic issue. Sprawl is fundamentally an emergent outcome fueled by a multiplicity of actions taken by individuals moving about the landscape, making their individual decisions to inhabit, purchase, ranch, develop, villainize each other, litigate, and sell land—all without a central "plan." It is complex, multifaceted, and not reducible to the blaming of any single interest group. It would be so much easier to handle if it were, because you could simply eliminate one class of behaviors and fix the problem. Indeed, it is the desire for that type of solution that renders us susceptible to villainization arguments.

Since no single activity is responsible for undesired emergent properties of complex systems, such problems are intractable to our pluralistic political processes. Pluralist politics are rarely about seeking to "see" the whole system; they are about resolving competing claims to resources. In pluralist politics, groups bump up against each other, form coalitions, and compromise to try to leverage power and votes. Political actors hope that in this rough-and-tumble process, views will coalesce into a majority view that prevails and results in wise policy. However, groups try to knock each other's viewpoints out because they see each other as competitors. Rather than a variety of groups working to perceive systemic problems and develop appropriate systemic solutions, policy proposals instead are based on the view from one or two vantage points. Politicking groups get absorbed in positional bargaining—compromising and chipping away at others' positions to find a bottom line. And there is hardly ever time in the fast pace of legislative decision making to go back and rediagnose problems and then recast policy solutions that are based on a more complex understanding of phenomena.³

Resolving Complex Environmental Issues Through a Mutual Gains Strategy

Over the last 30 years, new sociopolitical methods have evolved for addressing environmental problems and disputes. Subsumed under the rubric of "environmental conflict resolution" (ECR), this new field broadly encompasses a multiplicity of efforts to build consensus and foster collaboration among disparate interest groups in the development of environmental policy and settlement of conflicts (see Bingham 1986; Carpenter and Kennedy 1988; Fisher and Ury 1981; Moore 1996; Susskind, McKernan, and Thomas-Larmer 1999). ECR processes operate quite differently from pluralistic political processes and judicial rulings that heretofore have set the rules of human engagement with the environment. Whereas judicial rulings and majority-rule legislative processes have tended to create winners and losers, ECR processes encourage stakeholders to take a mutual gains approach in recognition that most disputes are not zero-sum.

ECR processes in the United States often engage a professional neutral party to mediate or facilitate discussions. A cadre of professionals, drawn largely from the fields of law and psychology, now practice within the ECR field. Their theories of practice suggest that to construct solutions around areas of common interest, stakeholders must educate each other about their interests and their individually held knowledge about the resource, as well as the decision parameters and incentive structures that frame their actions. As stakeholders pool their knowledge, they begin to understand the complexity of the system and how the emergent problem is being produced. In theory, this opens a space for them to develop management approaches and policy incentive structures that encourage different individual decision making so that the system becomes reorganized to a different emergent outcome. Multistakeholder approaches characterizing ECR processes thus may have the potential to handle unwanted emergent patterns more effectively than pluralist politics that seek to suppress voices and achieve outright "wins."

In Arizona and other western states, multistakeholder dialogues have been occurring in what many refer to as "community-based collaborative groups" (CBCs). Most CBCs have been initiated by stakeholders (who may include agencies) to resolve conflicts over the use and management of specific watersheds or local landscapes. As they develop a better understanding of what is occurring in the system, they begin to create ongoing, adaptive-management plans that they hope will better handle the naturally occurring fluctuations in ecological processes and correct poor landscape outcomes of management regimes. These groups have been in existence for around 10 years, and researchers are in the beginning stages of trying to assess their environmental outcomes and answer meta-questions concerning their development.

There are many such groups in Arizona: the Malpai Borderlands group organized to reintroduce fire into a grassland

system; the Diablo Trust organized to address grazing issues on public lands; the Sonoita Valley Planning Partnership involved stakeholders in a discussion of an allotment management plan for the Empire-Cienega Natural Resource Area; the Altar Valley Conservation Alliance formed to document resource conditions across this large ranching valley. There are also watershed groups working to restore and maintain healthy watershed functions. In all cases of which we are aware, CBC groups become involved in managing the entire local ecological system—a “resource” that doesn’t move—rather than in maintaining a focus on one or two individual elements of the system.

Multistakeholder Collaborative Policy Dialogues

State and national multistakeholder policy dialogues extend the CBC trend, but they differ in that they are not tied to a specific landscape. Instead, they attempt to address the many arenas in which the broad-based conflicts over land use are happening, including policy and institutional arrangements at the state and national levels. Of more recent origin than CBCs, policy-focused efforts seem a logical and necessary next stage of systemic reorganization around natural resources, for at least two reasons.

First, the purview of many CBC groups extends onto federal lands (and in Arizona, State Trust lands), and their work is bound by federal regulations that are not specific to a locale. Many of these regulations are keyed to specific resources within ecological systems rather than to addressing the system as a whole. For example, the Endangered Species Act has a single-species focus and can lead to management conundrums where two or more endangered species are trying to occupy the same area but have incompatible habitat requirements. If regulations or administrative policies constrict actions the group sees as critical to the effective management of the whole system, it must find a way to address the federal regulations. However, it is very difficult for a local group to address national policy.

Second, conditions threatening to a local ecological system may not be under the control of a local group. For example, a local CBC group can institute watershed restoration projects, but the most significant threats may involve growth or decisions to allocate water outside of watersheds.

Given these issues, local groups must find a way to gain voice at regional, state, and national levels. Multistakeholder policy dialogues offer such a possibility.

The challenges to creating effective collaborative policy dialogues are quite different than those at the local CBC level, however. Policy-focused dialogues operate more directly and more recognizably in the political arena, working across ecological system types to address broad-based conflicts that pit environmental values and ideologies against each other. These conflicts are fought out in a bewildering array of jurisdictions and systemic levels. Challenges to grazing, for example, occur: during individual BLM or Forest Service allotment management planning; during

national forest planning; through litigation forcing agencies to comply with provisions of the Endangered Species Act; in political lobbying at state and federal levels during legislation and budget processes; in legal challenges to Arizona State Land Department leasing policies; in local and state elections, within municipal or county planning processes, such as the development of Pima County’s Sonoran Desert Conservation Plan; and within state wildlife department administrative policy making and planning. The foregoing illustrates the variety of arenas political ecologists must investigate to understand the “ecology of politics” around natural resource use.

ECR policy dialogues are sociocultural innovations that address political complexity by gathering competing interests into a single dialogic process. The “conflict analysis” that ECR practitioners complete prior to initiation of a dialogue includes the identification of stakeholders, intervening legal structures and jurisdictional procedures, and understanding the history of conflicts. Once a process is convened, stakeholders continue to map this ecology as well as their disparate behaviors and decision parameters under existing administrative environments.

An Example of a Collaborative Policy Dialogue: The Arizona Common Ground Roundtable

The Arizona Common Ground Roundtable is a state-wide policy dialogue that grew out of an initial conversation between The Nature Conservancy, three ranching families, and anthropologist-ranch historian Tom Sheridan in an effort to move beyond the polarized debate around public lands grazing. Convened and facilitated by staff from the Udall Center’s ECR program, in several months’ time the group came to understand a lot about the political, social, economic, and ecological environments that might lead ranchers to sell out to real estate developers.

When it became clear to participants that the reterritorialization process on public land was related to sale of ranches for real estate development, they began to focus on how to build solutions based on a common interest in preserving open space. Conservationists wanted to achieve landscape preservation that could keep ecological units intact and support biodiversity, while ranchers wanted both to keep ranching and to protect their financial investment in land in case the economic viability of the ranch enterprise failed. The group looked for policy solutions that would achieve landscape conservation by keeping ranchers ranching and using ecologically sensitive practices. This proved difficult for a variety of reasons.

Conservationists either had to overcome very salient beliefs that ranching was responsible for massive degradation to landscapes or decide to proceed despite this belief, rationalizing ranching as the lesser of two evils. For their part, ranchers saw themselves as producing a public good—food. When they heard conservationists continue to characterize ranching as the lesser of two evils in their discussions, their

mistrust of the conservationists' support of various proposals increased.

Indeed, the many arenas in which reterritorialization battles were occurring fostered ongoing difficulties with trust, especially on the part of ranchers. Ranchers are trying to protect four types of land tenure arrangements in Arizona: private property, USDA Forest Service allotments, the Department of Interior's Bureau of Land Management allotments, and State Trust land leases. Political maneuverings and litigation continued within each of these arenas while the group worked and resulted in participants' reluctance to commit to supporting policy recommendations throughout a legislative process.

Participants proposed interesting ideas for how to protect private property rights and prevent "takings" of property value without compensation through the purchase-of-development rights (PDR). This proposal partially responds to the question of how society can avert the tragedy of open access associated with land markets. PDR involves the sale of a conservation easement on a piece of private property. The easement restricts the ability to convert the land for residential development, while allowing existing uses (like ranching) to continue. It is a way for ranchers to cash out the development value of their land without having to actually develop it, so it addresses both their interests: continuing to ranch and protecting their investment in the land. On the conservation side, programs that have been set up elsewhere in the country to facilitate execution of PDRs establish priorities for use of funds to purchase development rights, thereby targeting limited funding to areas of ecological concern.

In Arizona, reterritorialization challenges to land tenure arrangements on public and State Trust lands worked against the acceptance of PDR as a solution. If ranchers sell conservation easements and then lose access to forage allotments, they will lose the ability to maintain viable ranch operations. The ranchers then potentially lose the remaining value of the privately owned portion of ranches that are associated with the ability to ranch. Therefore, until ranchers can be assured of retaining the value of their land as a working landscape, or be compensated for its loss, they may not be disposed to sell an easement as a way of protecting the land from development. This issue was not resolved during roundtable discussions.

For multistakeholder policy dialogues to achieve an effective collaboration, stakeholders—who have cut their political teeth in pluralistic political processes—need time to develop negotiation skills that foster collaboration. This was evident during the initial stages of roundtable discussions, when interest groups rushed to present policy solutions before gathering enough information to fully understand the complexity of the problem. Many played their cards close to their chests because they viewed themselves in a competitive bargaining situation, rather than perceiving the task as that of educating each other about interests and allowing trust to build. Others initially wanted to prevent differences of opinion from surfacing for fear it would obscure common

ground, rather than seeing the understanding of differences as critical to diagnosing the problem and to constructing effective solutions.

It may take several years for the trust and interest-based bargaining skills that are critical for effective collaboration to develop. Indeed, this has been the experience of CBC groups (Mandy Metzger, president of Diablo Trust, personal communication, October 1998). We would expect this to be an even more difficult task within policy dialogues, where the number of stakeholders and interests may be huge. For even if a dialogue group is convened and spends the time necessary for participants to acquire new political reflexes that match the collaborative mode, diagnoses the problem, and finally arrives at some collaboratively developed recommendations, participants must return to existing policy-making arenas that operate through pluralistic politics. This implies that participants in collaborative policy dialogues cannot jettison their pluralist political skills in favor of collaboration and consensus. They will have to acquire new skills, pivot between skill sets, and figure out when and how to use each.

A Need for Hybrid Politics

To reiterate, new sociopolitical methods for addressing environmental problems and disputes are needed to handle unwanted emergent environmental patterns that seem intractable to pluralist politics. However, we are not suggesting that pluralist political methods should be marginalized or eliminated. Pluralism has an extremely important place in the face of unwanted emergent patterns like sprawl. Regulatory and administrative structures ossify around the privileging of one commodity value and control by groups with access rights. Where power is too concentrated, and bureaucratic structures too deaf and blind, pluralist activism is critical to the achievement of change. Activism enables conflicts to reach a critical state that forces powerful parties both to respond to changing public values and to see and address problems they would otherwise be inclined to externalize. The Tucson-based Center for Biological Diversity, among other activist groups, has been so successful in pursuing a lawsuit strategy using the Endangered Species Act that ranchers—the traditional power holders in the West—are being forced to come to terms with the new values emerging in the region.⁴ Indeed, in one roundtable meeting a rancher expressed gratitude for the center because it forced attention on a number of important environmental and economic issues that otherwise might have emerged gradually and imperceptibly.

Pluralist politics enable activists to speak truth to power when power is concentrated in one interest group or coalition. Collaborative approaches enable effective dialogue among stakeholders when power is diffuse and help them understand the truth about emergent patterns, so they can together construct a more sustainable path to the future. Pluralism backstops collaboration. It keeps collaboration honest because if key interests are not adequately addressed, proposals will become the subject of oppositional activism.

Conclusions

The case of land-use conflicts in Arizona illustrates that a tragedy of open access is not just about environmental degradation. It is also about individuals having to choose between their good intentions and sentiments and the protection of their economic interests. Their dilemma creates the opening for villainization of interest groups in reterritorialization contests, which, if won in the current globalizing context without the benefit of collaboration, will most likely lead to unintended environmental degradation because of failure to recognize what is creating an emergent problem. Our example shows this dynamic in Arizona, where ranchers have been villainized to the possible detriment of biodiversity.

The public has needed a way to create more sustainable solutions to complex environmental disputes. Economic globalization and territorialization processes of nation-states foster conditions leading to ecological system degradation through commoditization of natural resource elements. Contests over resources that are fought as win-lose propositions will not solve the problem because they narrow the question to something that is resolvable as an allocation dispute. The problem is more than one of allocation. The problem of sustainability requires both that competing claims to resources be resolved and that institutions successfully mediate between the different timescales of economic and ecological functioning.

Sustainable paths to the future can seem elusive. We do not know enough about natural system processes. We need time to develop new political skills. The pace of environmental change appears to be quickening with global warming, and the international political system seems much less stable in the post-September 11 era.

The kind of hope we spy is that new means are being created for taking more holistic approaches to systemic problems through the focusing of attention on resources that do not move—they are the “ground” of ecological processes and communities. In the natural and social sciences, complexity theory and political ecology offer new frameworks for understanding complex environmental issues. Community-based collaborative groups are gaining some political leverage by focusing attention holistically on landscapes or watersheds. Their work is gradually extending into institutions and policy arenas through multistakeholder policy dialogues that follow the collaborative and consensus-building precepts of the maturing field of environmental conflict resolution. Whether these efforts can effectively counterbalance the forces of economic globalization and political instability depends at least on the following: development of effective hybrid politics pursued at many levels (including internationally); clear-eyed assessment of interests; and collaborative efforts toward development of resource-use strategies that enable the present generation to meet its needs without compromising the ability of future generations to do the same. To these we would add environmental justice for all dependent on the use of a resource at a given point in time.

Notes

¹“Sustainability” as a construct has been extensively critiqued (see Sachs 1993:17-20 and Stott and Sullivan 2000). Likewise, “nature,” “biodiversity,” “ecological systems,” and other constructs to which we refer in this paper have been hotly debated (see Escobar 1999). In general, we agree with Escobar’s (1992:1-2) distinction between “the belief in the existence of pristine Nature outside of history and human context” and “the existence of a biophysical reality—prediscursive and pre-social if you wish—with structures and processes of its own which the life sciences try to understand.” We follow the latter usage in all references to “nature,” “natural processes,” and “ecological systems.”

²In Pima County, for example, the endangered Cactus Ferruginous Pygmy Owl is predominantly found in Altar Valley, a ranching area, though its habitat reportedly extends through the greater Tucson area.

³Observations regarding pluralist politics are based on data obtained through study of interest-group negotiations during the 1999 Arizona Governor’s Growing Smarter Commission process and the subsequent special session of the 2000 Arizona Legislature, convened by Governor Hull to pass Growing Smarter legislation. Formal and informal interviews with representatives of key interest groups were conducted within two months following passage of the legislation.

⁴We cannot do justice to this story in a brief footnote, but the CBD targets land uses they believe endanger species and develops litigation strategies that interfere with the targeted land use. Ranching has been viewed by environmental groups as highly detrimental to species survival, although this assertion is contested and the subject of a great deal of research. However, year-round livestock access to riparian areas is now accepted by many as detrimental to these systems, and ranchers and other range managers have developed special management strategies for riparian areas that have allowed these areas to revert to earlier stream morphology configurations and rebound in vegetation productivity. The CBD has focused on the issue of riparian area protection, and it would be hard to disallow the contribution their activism has made to restoration and protection of these richly biodiverse areas.

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